

### **ABSTRACT OF THE DISCLOSURE**

A laser based coordinate measuring device measures a position of a remote target. The laser based coordinate measuring device includes a stationary portion, a rotatable portion, and at least a first optical fiber. The stationary portion has at least a first laser radiation source and at least a first optical detector, and the rotatable portion is rotatable with respect to the stationary portion. The first optical fiber system, which optically interconnects the first laser radiation source and the first optical detector with an emission end of the first optical fiber system, has the emission end disposed on the rotatable portion. The emission end emits laser radiation to the remote target and receives laser radiation reflected from the remote target with the emission direction of the laser radiation being controlled according to the rotation of the rotatable portion.